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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/837,460	04/19/2001	Yoshiyuki Nitta	206346US-2	6752

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EXAMINER

CHU, GABRIEL L

ART UNIT PAPER NUMBER

2114

DATE MAILED: 04/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/837,460

Applicant(s)

NITTA, YOSHIYUKI

Examiner

Gabriel L. Chu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 February 2005.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-12 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) 4, 6 and 9-12 is/are allowed.
6) ☒ Claim(s) 1 is/are rejected.
7) ☒ Claim(s) 2, 3, 7 and 8 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by US 6473396 to Kumar. Referring to claim 1, Kumar discloses a field apparatus control system for controlling a field apparatus connected to a field bus, comprising: first and second main control units configured to control the field apparatus (From line 8 of column 3, "The apparatus may comprise a bus on which a plurality of server modules may be coupled to. One of the server modules may be configured to be active and remaining server modules may be configured to be on standby. A plurality of client modules may be coupled to the bus and configured to be in communication with the active server module using logical addresses."); and first and second communication control units configured to process information communication between the first and second main control units, respectively, and the field apparatus via the field bus, wherein the first main control unit and the first communication control unit are in a normal system mode or in a standby system mode (From line 42 of column 3, "According to one example, the physical slots in which the various hardware modules are connected to, are assigned physical addresses to identify the location of the hardware modules." Further, from line 11 of column 3, "One of the server modules may be configured to be active".), the second main control unit and the second communication control unit are in a normal system mode or in a standby system (From line 12 of column 3, "and remaining server modules

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may be configured to be on standby.") and each of the first and second communication control units have a same address on a network via the field bus, and wherein information outputted to the same address from the field apparatus via the field bus is received and processed by both the first and second communication control units (From line 61 of column 4, "According to another method, packets sent by the client modules 121, 122, 123 to the active server module 101 are also routed by the active server module 101 to one of the standby modules 102. However, only the active server module 101 processes the received packets. As for the standby module 102, the received packets may be stored in a buffer on a first in first out basis. As the buffer overflows, the earlier received packets are purged.").

Allowable Subject Matter

3. Claims 4, 6, 9, 10, 11, 12 allowed.
4. Claims 2, 3, 7, 8 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

5. Applicant's arguments filed 8 February 2005 have been fully considered but they are not persuasive. Regarding Applicant's argument that the Office Action and Kumar show that Kumar does not indicate received packets are processed, this is not necessarily the case. As claimed by Applicant, claim 1 broadly claims "processed". The previous office action explicitly stated that Kumar does not process the ***payload*** (see previous office action), not that no processing occurs whatsoever. Indeed, Kumar's

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standby, as previously argued, must at least process the packet to determine whether or not the packet pertains to it. Kumar distinguishes between reception and response, from line 43 of column 6 (with emphasis), "The client modules 121, 122, 123 communicate with the active server module 101 using logical addresses while the **standby modules 102, 103 remain *unresponsive* to the logical addresses** until such time one of the modules become activated to take over the role of active server module. Once activated, the standby module that assumes the role of the active server module is configured to receive packets with destination addresses that are both physical and logical." Stated differently, standby modules "receive" the packets (or at the very least the "information" as to the destination logical address outputted to that same logical address), but simply ignore or do not process the **payload** of the packets of the corresponding logical address while it is designated as a standby module.

Further, Kumar discloses the standby modules process the packets at least enough to buffer them in a FIFO, from line 61 of column 4, "According to another method, packets sent by the client modules 121, 122, 123 to the active server module 101 are also routed by the active server module 101 to one of the standby modules 102. However, only the active server module 101 processes the received packets. As for the standby module 102, the received packets may be stored in a buffer on a first in first out basis. As the buffer overflows, the earlier received packets are purged." Applicant has not claimed any extent or nature of the processing although Applicant has pointed out what in Applicant's specification the extent and nature are intended to be. Applicant cannot rely on the generic language of the prior art to distinguish Applicant's invention.

However, in the interest of compact prosecution, assuming *arguendo* Applicant had claimed processing of the payload, having redundant controllers that both process the payload is known in the art. An example of this is shown in US 5909427 to Manning et al. (with emphasis), "FIG. 2 is a block diagram illustrating a **redundant switch** system, including the data interconnection with first I/O module 14. As discussed above, when first I/O module 14 provides information to foreground switch control module 10, the information is correspondingly also provided to background switch control module 12. Background switch control module 12 includes the same or similar components as that provided in foreground switch control module 10. These **same or similar components** may include a background switch fabric controller 124, and a background switch fabric 126 as shown in FIG. 2. Before both foreground switch control module 10 and background switch control module 12 may **both receive the same information**, background switch fabric controller 124 and foreground switch fabric controller 24 must be **synchronized so that these controllers stay in lock-step. This may include identically configuring control registers, and updating tables and entries.** When a communication cell is provided from TSPP 28, it is provided to serializer 32 in parallel format and converted to serial format and provided to processor interface 36. In one embodiment, processor interface 36 then provides the communication cell to background switch fabric 126 through a background first I/O serial data signal 41. This same communication cell is also provided to foreground switch fabric 26 through first I/O serial data signal 40. At this time, both background switch fabric 126 and foreground switch fabric 26, under the control of their respective

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switch fabric controllers, map or switch the communication cell to a designated output port where the cell may then be provided to that port's I/O module for further processing.

In **normal operation**, first I/O serial data signal 40, as provided at the output of foreground switch fabric 26, is a communication cell that is provided to the designated I/O module. However, **if foreground switch control module 10 fails** or is taken out of service, **then background first I/O serial data signal 41, as provided at the output of background switch fabric 126, may be provided to the designated I/O module."**

A person of ordinary skill in the art at the time of the invention would have been motivated to use lockstepped controllers because, as stated by Manning, "if foreground switch control module 10 fails or is taken out of service, then background first I/O serial data signal 41, as provided at the output of background switch fabric 126, may be provided to the designated I/O module."

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 5909427 to Manning et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gabriel L. Chu whose telephone number is (571) 272-3656. The examiner can normally be reached on weekdays between 8:30 AM and 5:00 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert W. Beausoliel, Jr. can be reached on (571) 272-3645. The fax

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phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

gc


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